

IN THE CLAIMS:

Please cancel claims 1-12 without prejudice or disclaimer to the subject matter therein.

Please add new claims 13-14 as follows.

13. A signal recording and reproducing apparatus comprising:

- a modulator operable to modulate a first data stream to an m-level ASK modulated signal and modulate a second data stream to an n-level ASK modulated signal, n being an integer larger than m,

- a bias generator operable to bias the m-level ASK modulated signal and the n-level ASK modulated signal to produce a biased signal,

- a recorder operable to output the biased signal to a recording medium,

- a reproducer operable to reproduce the m-level ASK modulated signal and the n-level ASK modulated signal based on information of the recording medium, and

- a demodulator operable to demodulate the m-level ASK modulated signal to the first data stream and demodulate the n-level ASK modulated signal to the second data stream.

14. A signal recording and reproducing method comprising:

- modulating a first data stream to an m-level ASK modulated signal and modulating a second data stream to an n-level ASK modulated signal, n being an integer larger than m,

- biasing the m-level ASK modulated signal and the n-level ASK modulated signal to produce a biased signal,

- outputting the biased signal to a recording medium,

- reproducing the m-level ASK modulated signal and the n-level ASK modulated signal based on information of the recording medium, and

- demodulating the m-level ASK modulated signal to the first data stream and demodulating the n-level ASK modulated signal to the second data stream.